Microbac

Laboratory Report Number: L12020497

Mark Lyon
Environmental Waste Solutions
2440 Louisiana Blvd
Albuquerque, NM 87110

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.

This report was certified on March 05 2012

David L. Vandenberg

David Vandenberg – Managing Director

State of Origin: NM
Accrediting Authority: N/A ID:N/A
QAPP: DOD Ver 4.1

Microbac

Lab Report #: L12020497
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0014187	G	1.0		1002239552260004575000874824307360
0014175	G	0.0		1015923852260004575000795761765670

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct perservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac

Lab Report #: L12020497
Lab Project #: 3005.011
Project Name: White Sands MR
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
HTA-13-0212-1	L12020497-01	02/15/2012 10:33	02/16/2012 10:40
HTA-13-0212-1	L12020497-02	02/15/2012 10:33	02/16/2012 10:40
HTA-3-0212-1	L12020497-03	02/15/2012 12:00	02/16/2012 10:40
HTA-3-0212-1	L12020497-04	02/15/2012 12:00	02/16/2012 10:40
HTA-3-0212-MS	L12020497-05	02/15/2012 12:00	02/16/2012 10:40
HTA-3-0212-MS	L12020497-06	02/15/2012 12:00	02/16/2012 10:40
HTA-3-0212-MSD	L12020497-07	02/15/2012 12:00	02/16/2012 10:40
HTA-3-0212-MSD	L12020497-08	02/15/2012 12:00	02/16/2012 10:40

Login Number: L12020497
Department: General Chromatography
Analyst: John W. Richards Jr.

METHOD

Analysis SW-846 6850

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: Perchlorate. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Samples: Sample 01 was analyzed at a dilution to be within calibration range.

Internal Standards: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration

is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 42834
Approved By: Mike Cochran

Login Number: L12020497
Department: Conventionals
Analyst: Holly Reed

METHOD

Analysis SW846 9040C,9045D/EPA 150.1/SM4500-H B (pH)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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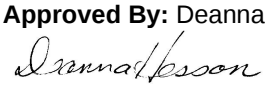
Narrative ID: 42620
Approved By: Deanna Hesson



Login Number: L12020497
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: The percent difference was out of range for the following analytes: Tetryl. Please see the applicable QC report for a detailed presentation of the failures.

Continuing Calibration and Tune: Recoveries out of range were observed for the following analytes: Tetryl. Please see the applicable QC report for a detailed presentation of the failures.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met. All positive hits were confirmed by second column analysis.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical

judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

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Narrative ID: 42863
Approved By: Mike Cochran

Login Number: L12020497
Department: Metals
Analyst: Kim Rhodes
Analyst #2: Ji Hu

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG390215 - All acceptance criteria were met.

Matrix Spikes: WG390215 - Client sample 05 yielded results that were instrument flagged for uncorrected interference upon initial analysis. The sample was reanalyzed for all analytes on a later calibration. For consistency with the batch QC sample 05(MS), the reference 03 and batch QC samples 07(MSD) were also reanalyzed at dilutions for all analytes. Sample 03 was chosen by the client for MS/MSD analysis. Samples 05(MS) and 07(MSD) met all acceptance criteria. Sample 04 was chosen by the client for MS/MSD analysis. Samples 06(MS) and 08(MSD) yielded a noncompliant recovery for calcium.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 42629
Approved By: Sheri Pfalzgraf

Login Number: L12020497
Department: Metals
Analyst: Erin Long

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: WG390087 - The continuing calibration verification analyzed on 21-FEB-2012 at 18:38 yielded a noncompliant result for selenium. Since this CCV bracketed compliant interference check standards and did not bracket any client or batch QA/QC samples, no further action was taken.

Continuing Calibration Blank: WG390087 - Due to continuing calibration blank failure for selenium on 20-FEB-2012 at 15:55, client samples 02, 04, 06, 08 and all batch QA/QC were reanalyzed on a later calibration.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG390087 - All acceptance criteria were met.

Matrix Spikes: WG390087 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 06(MS) and 08(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 42492
Approved By: Sheri Pfalzgraf

Login Number: L12020497
Department: Metals - AA
Analyst: Pierce Morris

METHOD

Preparation: SW-846 7470

Analysis: SW-846 7470

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: WG390193 - The continuing calibration blank analyzed initially on 21-FEB-2012 at 09:01 yielded a noncompliant result for mercury. The continuing calibration blank was reanalyzed at 09:07 prior to sample analysis and was compliant for all analytes of concern.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG390193 - All acceptance criteria were met.

Matrix Spikes: WG390193 - Sample 04 was chosen by the client for MS/MSD analysis. Samples 06(MS) and 08(MSD) met all acceptance criteria.

SAMPLES

Samples: All acceptance criteria were met.

Narrative ID: 42534
Approved By: Sheri Pfalzgraf

Login Number: L12020497
Department: General Chromatography
Analyst: Jeremy Kinney
Analyst #2: Hema Vilasagar

METHOD

Analysis SW-846 9056/300.0

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: Chloride. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Samples: Samples 01,03 were analyzed at dilutions only due to its high screen result for SO4 which was over the calibration range.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor

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Narrative ID: 42656
Approved By: Mike Cochran

Login Number: L12020497
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 310.2 (Alkalinity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: Alkalinity, Bicarbonate (as CaCO3), Alkalinity, Total (as CaCO3), Alkalinity, Carbonate (as CaCO3). Please see the applicable QC report for a detailed presentation of the failures.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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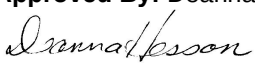
Narrative ID: 42619
Approved By: Deanna Hesson



Login Number: L12020497
Department: Conventionals
Analyst: Deanna Hesson

METHOD

Analysis EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

Sample Analysis: Nitrate is reported as the difference of nitrate-nitrite (28 day hold) and nitrite (48 hour hold). Both analysis were analyzed within the appropriate hold time. The nitrate hold time is within compliance.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Recoveries out of range were observed for the following analytes: Nitrate-Nitrite (as N). Please see the applicable QC report for a detailed presentation of the failures.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 42621
Approved By: Deanna Hesson

Certificate of Analysis

Sample #:	L12020497-01	**PrePrep Method:**	N/A	**Instrument:**	LCMS1
Client ID:	HTA-13-0212-1	**Prep Method:**	6850	**Prep Date:**	02/23/2012 13:15
Matrix:	Water	**Analytical Method:**	6850	**Cal Date:**	01/24/2012 17:25
Workgroup #:	WG390462	**Analyst:**	JWR	**Run Date:**	02/23/2012 21:27
Collect Date:	02/15/2012 10:33	**Dilution:**	100	**File ID:**	1LM.LM15400
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Perchlorate	14797-73-0	581		20.0	10.0

Sample #:	L12020497-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	HTA-13-0212-1	**Prep Method:**	3535	**Prep Date:**	02/21/2012 09:30
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	02/10/2011 16:32
Workgroup #:	WG390324	**Analyst:**	ECL	**Run Date:**	02/22/2012 20:15
Collect Date:	02/15/2012 10:33	**Dilution:**	1	**File ID:**	5L006555.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
1,3,5-Trinitrobenzene	99-35-4		U	1.05	0.263
1,3-Dinitrobenzene	99-65-0		U	1.05	0.263
2,4,6-Trinitrotoluene	118-96-7		U	1.05	0.263
2,4-Dinitrotoluene	121-14-2		U	1.05	0.263
2,6-Dinitrotoluene	606-20-2		U	1.05	0.263
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.05	0.263
2-Nitrotoluene	88-72-2		U	1.05	0.263
3-Nitrotoluene	99-08-1		U	1.05	0.263
4-Nitrotoluene	99-99-0		U	1.05	0.263
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.05	0.263
HMX	2691-41-0		U	1.05	0.263
Nitrobenzene	98-95-3		U	1.05	0.263
RDX	121-82-4	1.71		1.05	0.263
Tetryl	479-45-8		U	1.05	0.263

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	93.5	50	150	

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #: L12020497-01 **PrePrep Method:** N/A **Instrument:** HPLC4
Client ID: HTA-13-0212-1 **Prep Method:** 3535 **Prep Date:** 02/21/2012 09:30
Matrix: Water **Analytical Method:** 8330B **Cal Date:** 02/15/2012 19:12
Workgroup #: WG390324 **Analyst:** ECL **Run Date:** 02/23/2012 16:52
Collect Date: 02/15/2012 10:33 **Dilution:** 1 **File ID:** 4L023275.F
Sample Tag: CF01 **Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
RDX	121-82-4	1.68		1.05	0.263

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	97.0	50	150	

Sample #: L12020497-01 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: HTA-13-0212-1 **Prep Method:** 3005A **Prep Date:** 02/20/2012 07:41
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 02/22/2012 14:46
Workgroup #: WG390215 **Analyst:** KHR **Run Date:** 02/22/2012 17:20
Collect Date: 02/15/2012 10:33 **Dilution:** 1 **File ID:** T2.022212.172054
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	0.123		0.100	0.0500
Manganese, Total	7439-96-5	0.0623		0.0100	0.00500

Sample #: L12020497-01 **PrePrep Method:** N/A **Instrument:** IC2
Client ID: HTA-13-0212-1 **Prep Method:** 300.0 **Prep Date:** 02/17/2012 16:30
Matrix: Water **Analytical Method:** 300.0 **Cal Date:** 12/21/2011 13:49
Workgroup #: WG390018 **Analyst:** JBK **Run Date:** 02/18/2012 01:15
Collect Date: 02/15/2012 10:33 **Dilution:** 3 **File ID:** I20218120115.32
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	28.8		0.600	0.300
Sulfate	14808-79-8	144		3.00	1.50

Sample #: L12020497-01 **PrePrep Method:** N/A **Instrument:** ORION-4STAR
Client ID: HTA-13-0212-1 **Prep Method:** 9040C **Prep Date:** N/A
Matrix: Water **Analytical Method:** 9040C **Cal Date:**
Workgroup #: WG389819 **Analyst:** HJR **Run Date:** 02/16/2012 13:35
Collect Date: 02/15/2012 10:33 **Dilution:** 1 **File ID:** OS12021716282001
Sample Tag: **Units:** UNITS

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.03		0.000	0.000

Certificate of Analysis

Sample #:	L12020497-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-13-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:50
Collect Date:	02/15/2012 10:33	**Dilution:**	1	**File ID:**	SC120221001.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		259		20.0	10.0

Sample #:	L12020497-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-13-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:50
Collect Date:	02/15/2012 10:33	**Dilution:**	1	**File ID:**	SC120221001.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		259		20.0	10.0

Sample #:	L12020497-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-13-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:50
Collect Date:	02/15/2012 10:33	**Dilution:**	1	**File ID:**	SC120221001.021
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020497-01	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-13-0212-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390221	**Analyst:**	DIH	**Run Date:**	02/21/2012 13:25
Collect Date:	02/15/2012 10:33	**Dilution:**	1	**File ID:**	SC12022209184101
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		1.55		0.0500	0.0250

Certificate of Analysis

Sample #:	L12020497-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	HTA-13-0212-1	**Prep Method:**	3005A	**Prep Date:**	02/20/2012 07:41
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	02/22/2012 14:46
Workgroup #:	WG390215	**Analyst:**	KHR	**Run Date:**	02/22/2012 17:24
Collect Date:	02/15/2012 10:33	**Dilution:**	1	**File ID:**	T2.022212.172412
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Dissolved	7429-90-5		U	0.100	0.0500
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Calcium, Dissolved	7440-70-2	94.3		0.200	0.100
Iron, Dissolved	7439-89-6		U	0.100	0.0500
Magnesium, Dissolved	7439-95-4	25.4		0.500	0.250
Manganese, Dissolved	7439-96-5	0.0626		0.0100	0.00500
Potassium, Dissolved	7440-09-7	1.65		1.00	0.500
Sodium, Dissolved	7440-23-5	59.5		0.500	0.250
Tin, Dissolved	7440-31-5		U	0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500
Zinc, Dissolved	7440-66-6		U	0.0200	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020497-02	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	HTA-13-0212-1	**Prep Method:**	3015	**Prep Date:**	02/20/2012 08:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/21/2012 10:39
Workgroup #:	WG390087	**Analyst:**	EDL	**Run Date:**	02/21/2012 20:49
Collect Date:	02/15/2012 10:33	**Dilution:**	1	**File ID:**	EL.022112.204937
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Dissolved	7782-49-2	0.00197		0.00100	0.000500

Sample #:	L12020497-02	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	HTA-13-0212-1	**Prep Method:**	3015	**Prep Date:**	02/20/2012 08:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/20/2012 10:19
Workgroup #:	WG390087	**Analyst:**	EDL	**Run Date:**	02/20/2012 14:53
Collect Date:	02/15/2012 10:33	**Dilution:**	1	**File ID:**	EL.022012.145334
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Dissolved	7440-36-0		U	0.00100	0.000500
Arsenic, Dissolved	7440-38-2	0.000527	J	0.00100	0.000500
Barium, Dissolved	7440-39-3	0.0383		0.00300	0.00150

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Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Dissolved	7440-43-9		U	0.000600	0.000300
Chromium, Dissolved	7440-47-3		U	0.00200	0.00100
Cobalt, Dissolved	7440-48-4		U	0.00100	0.000500
Copper, Dissolved	7440-50-8		U	0.00200	0.00100
Lead, Dissolved	7439-92-1		U	0.00100	0.000500
Nickel, Dissolved	7440-02-0	0.00242	J	0.00400	0.00200
Silver, Dissolved	7440-22-4		U	0.00100	0.000500
Thallium, Dissolved	7440-28-0		U	0.000200	0.000100

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #: L12020497-02 **PrePrep Method:** N/A **Instrument:** HYDRA
Client ID: HTA-13-0212-1 **Prep Method:** 7470A **Prep Date:** 02/20/2012 07:50
Matrix: Water **Analytical Method:** 7470A **Cal Date:** 02/21/2012 08:51
Workgroup #: WG390193 **Analyst:** PDM **Run Date:** 02/21/2012 09:23
Collect Date: 02/15/2012 10:33 **Dilution:** 1 **File ID:** HY.022112.092352
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Dissolved	7439-97-6		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #: L12020497-03 **PrePrep Method:** N/A **Instrument:** LCMS1
Client ID: HTA-3-0212-1 **Prep Method:** 6850 **Prep Date:** 02/23/2012 13:15
Matrix: Water **Analytical Method:** 6850 **Cal Date:** 01/24/2012 17:25
Workgroup #: WG390462 **Analyst:** JWR **Run Date:** 02/24/2012 14:06
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** 1LM.LM15410
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Perchlorate	14797-73-0	3.63		0.200	0.100

Sample #: L12020497-03 **PrePrep Method:** N/A **Instrument:** HPLC5
Client ID: HTA-3-0212-1 **Prep Method:** 3535 **Prep Date:** 02/21/2012 09:30
Matrix: Water **Analytical Method:** 8330B **Cal Date:** 02/10/2011 16:32
Workgroup #: WG390324 **Analyst:** ECL **Run Date:** 02/22/2012 16:02
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** 5L006548.F
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
1,3,5-Trinitrobenzene	99-35-4		U	1.02	0.255

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Analyte	CAS #	Result	Qual	LOQ	LOD
1,3-Dinitrobenzene	99-65-0		U	1.02	0.255
2,4,6-Trinitrotoluene	118-96-7		U	1.02	0.255
2,4-Dinitrotoluene	121-14-2		U	1.02	0.255
2,6-Dinitrotoluene	606-20-2		U	1.02	0.255
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.02	0.255
2-Nitrotoluene	88-72-2		U	1.02	0.255
3-Nitrotoluene	99-08-1		U	1.02	0.255
4-Nitrotoluene	99-99-0		U	1.02	0.255
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.02	0.255
HMX	2691-41-0		U	1.02	0.255
Nitrobenzene	98-95-3		U	1.02	0.255
RDX	121-82-4		U	1.02	0.255
Tetryl	479-45-8		U	1.02	0.255

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	88.0	50	150	

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #: L12020497-03 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: HTA-3-0212-1 **Prep Method:** 3005A **Prep Date:** 02/20/2012 07:41
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 02/23/2012 09:38
Workgroup #: WG390215 **Analyst:** JYH **Run Date:** 02/23/2012 12:34
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** T2.022312.123451
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	0.142		0.100	0.0500
Manganese, Total	7439-96-5		U	0.0100	0.00500

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #: L12020497-03 **PrePrep Method:** N/A **Instrument:** IC2
Client ID: HTA-3-0212-1 **Prep Method:** 300.0 **Prep Date:** 02/17/2012 16:30
Matrix: Water **Analytical Method:** 300.0 **Cal Date:** 12/21/2011 13:49
Workgroup #: WG390018 **Analyst:** JBK **Run Date:** 02/18/2012 02:48
Collect Date: 02/15/2012 12:00 **Dilution:** 3 **File ID:** I20218120248.37
Sample Tag: DL01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	25.8		0.600	0.300
Sulfate	14808-79-8	155		3.00	1.50

Certificate of Analysis

Sample #:	L12020497-03	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	HTA-3-0212-1	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG389819	**Analyst:**	HJR	**Run Date:**	02/16/2012 13:35
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	OS12021716282301
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.11		0.000	0.000

Sample #:	L12020497-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:51
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020497-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:51
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		236		20.0	10.0

Sample #:	L12020497-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-1	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:51
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.022
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		236		20.0	10.0

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Sample #:	L12020497-03	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-1	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390221	**Analyst:**	DIH	**Run Date:**	02/21/2012 13:25
Collect Date:	02/15/2012 12:00	**Dilution:**	4	**File ID:**	SC12022209185001
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		3.09		0.200	0.100

Sample #:	L12020497-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	HTA-3-0212-1	**Prep Method:**	3005A	**Prep Date:**	02/20/2012 07:41
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	02/22/2012 14:46
Workgroup #:	WG390215	**Analyst:**	KHR	**Run Date:**	02/22/2012 17:27
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	T2.022212.172731
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Dissolved	7429-90-5		U	0.100	0.0500
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Calcium, Dissolved	7440-70-2	92.8		0.200	0.100
Iron, Dissolved	7439-89-6		U	0.100	0.0500
Magnesium, Dissolved	7439-95-4	21.6		0.500	0.250
Manganese, Dissolved	7439-96-5		U	0.0100	0.00500
Potassium, Dissolved	7440-09-7	1.08		1.00	0.500
Sodium, Dissolved	7440-23-5	70.0		0.500	0.250
Tin, Dissolved	7440-31-5		U	0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500
Zinc, Dissolved	7440-66-6	0.488		0.0200	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020497-04	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	HTA-3-0212-1	**Prep Method:**	3015	**Prep Date:**	02/20/2012 08:33
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/21/2012 10:39
Workgroup #:	WG390087	**Analyst:**	EDL	**Run Date:**	02/21/2012 20:26
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	EL.022112.202618
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Dissolved	7782-49-2	0.00238		0.00100	0.000500

Certificate of Analysis

Sample #: L12020497-04 **PrePrep Method:** N/A **Instrument:** ELAN-ICP
Client ID: HTA-3-0212-1 **Prep Method:** 3015 **Prep Date:** 02/20/2012 08:33
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 02/20/2012 10:19
Workgroup #: WG390087 **Analyst:** EDL **Run Date:** 02/20/2012 15:01
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** EL.022012.150121
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Dissolved	7440-36-0		U	0.00100	0.000500
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500
Barium, Dissolved	7440-39-3	0.0295		0.00300	0.00150
Cadmium, Dissolved	7440-43-9		U	0.000600	0.000300
Chromium, Dissolved	7440-47-3		U	0.00200	0.00100
Cobalt, Dissolved	7440-48-4		U	0.00100	0.000500
Copper, Dissolved	7440-50-8	0.00472		0.00200	0.00100
Lead, Dissolved	7439-92-1	0.00203		0.00100	0.000500
Nickel, Dissolved	7440-02-0	0.00251	J	0.00400	0.00200
Silver, Dissolved	7440-22-4		U	0.00100	0.000500
Thallium, Dissolved	7440-28-0		U	0.000200	0.000100

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #: L12020497-04 **PrePrep Method:** N/A **Instrument:** HYDRA
Client ID: HTA-3-0212-1 **Prep Method:** 7470A **Prep Date:** 02/20/2012 07:50
Matrix: Water **Analytical Method:** 7470A **Cal Date:** 02/21/2012 08:51
Workgroup #: WG390193 **Analyst:** PDM **Run Date:** 02/21/2012 09:27
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** HY.022112.092742
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Dissolved	7439-97-6		U	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #: L12020497-05 **PrePrep Method:** N/A **Instrument:** LCMS1
Client ID: HTA-3-0212-MS **Prep Method:** 6850 **Prep Date:** 02/23/2012 13:15
Matrix: Water **Analytical Method:** 6850 **Cal Date:** 01/24/2012 17:25
Workgroup #: WG390462 **Analyst:** JWR **Run Date:** 02/24/2012 14:25
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** 1LM.LM15411
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Perchlorate	14797-73-0	3.70		0.200	0.100

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Sample #: L12020497-05 **PrePrep Method:** N/A **Instrument:** HPLC5
Client ID: HTA-3-0212-MS **Prep Method:** 3535 **Prep Date:** 02/21/2012 09:30
Matrix: Water **Analytical Method:** 8330B **Cal Date:** 02/10/2011 16:32
Workgroup #: WG390324 **Analyst:** ECL **Run Date:** 02/22/2012 16:41
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** 5L006549.F
Sample Tag: 01 **Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
1,3,5-Trinitrobenzene	99-35-4	4.87		1.02	0.255
1,3-Dinitrobenzene	99-65-0	5.06		1.02	0.255
2,4,6-Trinitrotoluene	118-96-7	4.17		1.02	0.255
2,4-Dinitrotoluene	121-14-2	5.15		1.02	0.255
2,6-Dinitrotoluene	606-20-2	5.13		1.02	0.255
2-Amino-4,6-dinitrotoluene	35572-78-2	5.00		1.02	0.255
2-Nitrotoluene	88-72-2	5.03		1.02	0.255
3-Nitrotoluene	99-08-1	5.08		1.02	0.255
4-Nitrotoluene	99-99-0	5.14		1.02	0.255
4-Amino-2,6-dinitrotoluene	19406-51-0	5.57		1.02	0.255
HMX	2691-41-0	4.15		1.02	0.255
Nitrobenzene	98-95-3	5.03		1.02	0.255
RDX	121-82-4	4.39		1.02	0.255
Tetryl	479-45-8	4.20		1.02	0.255

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	96.4	50	150	

Sample #: L12020497-05 **PrePrep Method:** N/A **Instrument:** ICP-THERMO2
Client ID: HTA-3-0212-MS **Prep Method:** 3005A **Prep Date:** 02/20/2012 07:41
Matrix: Water **Analytical Method:** 6010B **Cal Date:** 02/23/2012 09:38
Workgroup #: WG390215 **Analyst:** JYH **Run Date:** 02/23/2012 12:38
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** T2.022312.123809
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	2.16		0.100	0.0500
Manganese, Total	7439-96-5	0.271		0.0100	0.00500

Certificate of Analysis

Sample #:	L12020497-05	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	HTA-3-0212-MS	**Prep Method:**	300.0	**Prep Date:**	02/17/2012 16:30
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG390018	**Analyst:**	JBK	**Run Date:**	02/18/2012 02:11
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	I20218120211.35
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	35.8	J	0.200	0.100
Sulfate	14808-79-8	216	J	1.00	0.500

J	Estimated value ; the analyte concentration was greater than the highest standard

Sample #:	L12020497-05	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	HTA-3-0212-MS	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG389819	**Analyst:**	HJR	**Run Date:**	02/16/2012 13:35
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	OS12021716282801
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.12		0.000	0.000

Sample #:	L12020497-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:52
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0

U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020497-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:52
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		291		20.0	10.0

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Sample #:	L12020497-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-MS	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:52
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.024
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		291		20.0	10.0

Sample #:	L12020497-05	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-MS	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390221	**Analyst:**	DIH	**Run Date:**	02/21/2012 13:25
Collect Date:	02/15/2012 12:00	**Dilution:**	4	**File ID:**	SC12022209185801
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		2.90		0.200	0.100

Sample #:	L12020497-06	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	HTA-3-0212-MS	**Prep Method:**	3005A	**Prep Date:**	02/20/2012 07:41
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	02/22/2012 14:46
Workgroup #:	WG390215	**Analyst:**	KHR	**Run Date:**	02/22/2012 17:30
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	T2.022212.173049
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Dissolved	7429-90-5	5.04		0.100	0.0500
Beryllium, Dissolved	7440-41-7	0.0258		0.00200	0.00100
Calcium, Dissolved	7440-70-2	97.9		0.200	0.100
Iron, Dissolved	7439-89-6	1.99		0.100	0.0500
Magnesium, Dissolved	7439-95-4	26.4		0.500	0.250
Manganese, Dissolved	7439-96-5	0.253		0.0100	0.00500
Potassium, Dissolved	7440-09-7	26.2		1.00	0.500
Sodium, Dissolved	7440-23-5	95.7		0.500	0.250
Tin, Dissolved	7440-31-5	0.538		0.500	0.250
Vanadium, Dissolved	7440-62-2	0.512		0.0100	0.00500
Zinc, Dissolved	7440-66-6	0.985		0.0200	0.0100

Certificate of Analysis

Sample #:	L12020497-06	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	HTA-3-0212-MS	**Prep Method:**	3015	**Prep Date:**	02/20/2012 08:32
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/20/2012 10:19
Workgroup #:	WG390087	**Analyst:**	EDL	**Run Date:**	02/20/2012 15:09
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	EL.022012.150908
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Dissolved	7440-36-0	0.0682		0.00100	0.000500
Arsenic, Dissolved	7440-38-2	0.0631		0.00100	0.000500
Barium, Dissolved	7440-39-3	0.0908		0.00300	0.00150
Cadmium, Dissolved	7440-43-9	0.0650		0.000600	0.000300
Chromium, Dissolved	7440-47-3	0.0628		0.00200	0.00100
Cobalt, Dissolved	7440-48-4	0.0631		0.00100	0.000500
Copper, Dissolved	7440-50-8	0.0704		0.00200	0.00100
Lead, Dissolved	7439-92-1	0.0688		0.00100	0.000500
Nickel, Dissolved	7440-02-0	0.0656		0.00400	0.00200
Silver, Dissolved	7440-22-4	0.0613		0.00100	0.000500
Thallium, Dissolved	7440-28-0	0.0665		0.000200	0.000100

Sample #:	L12020497-06	**PrePrep Method:**	N/A	**Instrument:**	ELAN-ICP
Client ID:	HTA-3-0212-MS	**Prep Method:**	3015	**Prep Date:**	02/20/2012 08:32
Matrix:	Water	**Analytical Method:**	6020	**Cal Date:**	02/21/2012 10:39
Workgroup #:	WG390087	**Analyst:**	EDL	**Run Date:**	02/21/2012 20:34
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	EL.022112.203404
Sample Tag:	02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Dissolved	7782-49-2	0.0565		0.00100	0.000500

Sample #:	L12020497-06	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	HTA-3-0212-MS	**Prep Method:**	7470A	**Prep Date:**	02/20/2012 07:50
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	02/21/2012 08:51
Workgroup #:	WG390193	**Analyst:**	PDM	**Run Date:**	02/21/2012 09:29
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	HY.022112.092930
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Dissolved	7439-97-6	0.00471		0.000222	0.000111

Certificate of Analysis

Sample #: L12020497-07 | **PrePrep Method:** N/A | **Instrument:** LCMS1
Client ID: HTA-3-0212-MSD | **Prep Method:** 6850 | **Prep Date:** 02/23/2012 13:15
Matrix: Water | **Analytical Method:** 6850 | **Cal Date:** 01/24/2012 17:25
Workgroup #: WG390462 | **Analyst:** JWR | **Run Date:** 02/24/2012 14:44
Collect Date: 02/15/2012 12:00 | **Dilution:** 1 | **File ID:** 1LM.LM15412
Sample Tag: 01 | **Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Perchlorate	14797-73-0	3.76		0.200	0.100

Sample #: L12020497-07 | **PrePrep Method:** N/A | **Instrument:** HPLC5
Client ID: HTA-3-0212-MSD | **Prep Method:** 3535 | **Prep Date:** 02/21/2012 09:30
Matrix: Water | **Analytical Method:** 8330B | **Cal Date:** 02/10/2011 16:32
Workgroup #: WG390324 | **Analyst:** ECL | **Run Date:** 02/22/2012 17:20
Collect Date: 02/15/2012 12:00 | **Dilution:** 1 | **File ID:** 5L006550.F
Sample Tag: 01 | **Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
1,3,5-Trinitrobenzene	99-35-4	4.89		1.02	0.255
1,3-Dinitrobenzene	99-65-0	4.98		1.02	0.255
2,4,6-Trinitrotoluene	118-96-7	4.03		1.02	0.255
2,4-Dinitrotoluene	121-14-2	5.08		1.02	0.255
2,6-Dinitrotoluene	606-20-2	5.07		1.02	0.255
2-Amino-4,6-dinitrotoluene	35572-78-2	4.89		1.02	0.255
2-Nitrotoluene	88-72-2	4.91		1.02	0.255
3-Nitrotoluene	99-08-1	5.03		1.02	0.255
4-Nitrotoluene	99-99-0	4.95		1.02	0.255
4-Amino-2,6-dinitrotoluene	19406-51-0	5.43		1.02	0.255
HMX	2691-41-0	4.17		1.02	0.255
Nitrobenzene	98-95-3	4.86		1.02	0.255
RDX	121-82-4	4.27		1.02	0.255
Tetryl	479-45-8	4.13		1.02	0.255

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	95.8	50	150	

Certificate of Analysis

Sample #:	L12020497-07	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	HTA-3-0212-MSD	**Prep Method:**	3005A	**Prep Date:**	02/20/2012 07:41
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	02/23/2012 09:38
Workgroup #:	WG390215	**Analyst:**	JYH	**Run Date:**	02/23/2012 12:41
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	T2.022312.124120
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Total	7439-89-6	2.23		0.100	0.0500
Manganese, Total	7439-96-5	0.274		0.0100	0.00500

Sample #:	L12020497-07	**PrePrep Method:**	N/A	**Instrument:**	IC2
Client ID:	HTA-3-0212-MSD	**Prep Method:**	300.0	**Prep Date:**	02/17/2012 16:30
Matrix:	Water	**Analytical Method:**	300.0	**Cal Date:**	12/21/2011 13:49
Workgroup #:	WG390018	**Analyst:**	JBK	**Run Date:**	02/18/2012 02:29
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	I20218120229.36
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	35.3	J	0.200	0.100
Sulfate	14808-79-8	216	J	1.00	0.500

J	Estimated value ; the analyte concentration was greater than the highest standard

Sample #:	L12020497-07	**PrePrep Method:**	N/A	**Instrument:**	ORION-4STAR
Client ID:	HTA-3-0212-MSD	**Prep Method:**	9040C	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	9040C	**Cal Date:**	
Workgroup #:	WG389819	**Analyst:**	HJR	**Run Date:**	02/16/2012 13:35
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	OS12021716283401
Sample Tag:		**Units:**	UNITS		

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.10		0.000	0.000

Sample #:	L12020497-07	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:52
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0

U	Analyte was not detected. The concentration is below the reported LOD.

Certificate of Analysis

Sample #:	L12020497-07	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:52
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		295		20.0	10.0

Sample #:	L12020497-07	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-MSD	**Prep Method:**	310.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	310.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390188	**Analyst:**	DIH	**Run Date:**	02/21/2012 10:52
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	SC120221001.025
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		295		20.0	10.0

Sample #:	L12020497-07	**PrePrep Method:**	N/A	**Instrument:**	SMARTCHEM
Client ID:	HTA-3-0212-MSD	**Prep Method:**	353.2	**Prep Date:**	N/A
Matrix:	Water	**Analytical Method:**	353.2	**Cal Date:**	02/21/2012 10:43
Workgroup #:	WG390221	**Analyst:**	DIH	**Run Date:**	02/21/2012 13:25
Collect Date:	02/15/2012 12:00	**Dilution:**	4	**File ID:**	SC12022209190701
Sample Tag:		**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		2.88		0.200	0.100

Sample #:	L12020497-08	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO2
Client ID:	HTA-3-0212-MSD	**Prep Method:**	3005A	**Prep Date:**	02/20/2012 07:41
Matrix:	Water	**Analytical Method:**	6010B	**Cal Date:**	02/22/2012 14:46
Workgroup #:	WG390215	**Analyst:**	KHR	**Run Date:**	02/22/2012 17:34
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	T2.022212.173400
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Dissolved	7429-90-5	5.00		0.100	0.0500
Beryllium, Dissolved	7440-41-7	0.0258		0.00200	0.00100
Calcium, Dissolved	7440-70-2	94.1		0.200	0.100

Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Iron, Dissolved	7439-89-6	2.00		0.100	0.0500
Magnesium, Dissolved	7439-95-4	25.6		0.500	0.250
Manganese, Dissolved	7439-96-5	0.252		0.0100	0.00500
Potassium, Dissolved	7440-09-7	26.1		1.00	0.500
Sodium, Dissolved	7440-23-5	92.3		0.500	0.250
Tin, Dissolved	7440-31-5	0.476	J	0.500	0.250
Vanadium, Dissolved	7440-62-2	0.513		0.0100	0.00500
Zinc, Dissolved	7440-66-6	0.970		0.0200	0.0100

J	Estimated value ; the analyte concentration was less than the LOQ.

Sample #: L12020497-08 **PrePrep Method:** N/A **Instrument:** ELAN-ICP
Client ID: HTA-3-0212-MSD **Prep Method:** 3015 **Prep Date:** 02/20/2012 08:32
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 02/21/2012 10:39
Workgroup #: WG390087 **Analyst:** EDL **Run Date:** 02/21/2012 20:41
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** EL.022112.204151
Sample Tag: 02 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Selenium, Dissolved	7782-49-2	0.0570		0.00100	0.000500

Sample #: L12020497-08 **PrePrep Method:** N/A **Instrument:** ELAN-ICP
Client ID: HTA-3-0212-MSD **Prep Method:** 3015 **Prep Date:** 02/20/2012 08:32
Matrix: Water **Analytical Method:** 6020 **Cal Date:** 02/20/2012 10:19
Workgroup #: WG390087 **Analyst:** EDL **Run Date:** 02/20/2012 15:16
Collect Date: 02/15/2012 12:00 **Dilution:** 1 **File ID:** EL.022012.151655
Sample Tag: 01 **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Dissolved	7440-36-0	0.0690		0.00100	0.000500
Arsenic, Dissolved	7440-38-2	0.0644		0.00100	0.000500
Barium, Dissolved	7440-39-3	0.0937		0.00300	0.00150
Cadmium, Dissolved	7440-43-9	0.0686		0.000600	0.000300
Chromium, Dissolved	7440-47-3	0.0649		0.00200	0.00100
Cobalt, Dissolved	7440-48-4	0.0635		0.00100	0.000500
Copper, Dissolved	7440-50-8	0.0702		0.00200	0.00100
Lead, Dissolved	7439-92-1	0.0707		0.00100	0.000500
Nickel, Dissolved	7440-02-0	0.0681		0.00400	0.00200
Silver, Dissolved	7440-22-4	0.0617		0.00100	0.000500
Thallium, Dissolved	7440-28-0	0.0689		0.000200	0.000100

Certificate of Analysis

Sample #:	L12020497-08	**PrePrep Method:**	N/A	**Instrument:**	HYDRA
Client ID:	HTA-3-0212-MSD	**Prep Method:**	7470A	**Prep Date:**	02/20/2012 07:50
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	02/21/2012 08:51
Workgroup #:	WG390193	**Analyst:**	PDM	**Run Date:**	02/21/2012 09:31
Collect Date:	02/15/2012 12:00	**Dilution:**	1	**File ID:**	HY.022112.093112
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury, Dissolved	7439-97-6	0.00468		0.000222	0.000111

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
March 5, 2012

ADC – ANTHONY D. CANTER	AJF – AMANDA J. FICKIESEN	ALB – ANNIE L. BROWN
ALV – AMY L. VALENTINE	AML – TONY M. LONG	AZH – AFTER HOURS
BLG – BRENDA L. GREENWALT	BRG – BRENDA R. GREGORY	CAA – CASSIE A. AUGENSTEIN
CAF – CHERYL A. FLOWERS	CEB – CHAD E. BARNES	CLC – CHRYS L. CRAWFORD
CLS – CARA L. STRICKLER	CLW – CHARISSA L. WINTERS	CPD – CHAD P. DAVIS
CS – CODY M. STRAHLER	CSH – CHRIS S. HILL	DDE – DEBRA D. ELLIOTT
DEV – DAVID E. VANDENBERG	DGB – DOUGLAS G. BUTCHER	DHG – DEBORAH H. GRIFFITHS
DIH – DEANNA I. HESSON	DLB – DAVID L. BUMGARNER	DLP – DOROTHY L. PAYNE
DLR – DIANNA L. RAUCH	DSM – DAVID S. MOSSOR	ECL – ERIC C. LAWSON
EDL – ERIN D. LONG	ERP – ERIN R. PORTER	FJB – FRANCES J. BOLDEN
HAV – HEMA VILASAGAR	HJR – HOLLY J. REED	JAL – JOHN A. LENT
JBK – JEREMY B. KINNEY	JDH – JUSTIN D. HESSON	JKS – JANE K. SCHAAD
JLL – JOHN L. LENT	JWR – JOHN W. RICHARDS	JWS – JACK W. SHEAVES
JYH – JI Y. HU	KEB – KATIE E. BARNES	KHR – KIM H. RHODES
KRA – KATHY R. ALBERTSON	LKN – LINDA K. NEDEFF	LSB – LESLIE S. BUCINA
MDA – MIKE D. ALBERTSON	MDC – MIKE D. COCHRAN	MES – MARY E. SCHILLING
MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR	MSW – MATT S. WILSON
PDM – PIERCE D. MORRIS	PWD – PAUL W. DENT	RAH – ROY A. HALSTEAD
REK – BOB E. KYER	RLB – BOB BUCHANAN	RLK – ROBIN L. KLINGER
RWC – RODNEY W. CAMPBELL	SJP – SUZANNE J. PAUGH	SLM – STEPHANIE L. MOSSBURG
SLP – SHERI L. PFALZGRAF	TIP – TAE I. PARRISH	TMB – TIFFANY M. BAILEY
TMM – TAMMY M. MORRIS	VC – VICKI COLLIER	WJB – WILL J. BEASLEY
WTD – WADE T. DELONG		

Microbac Laboratories Inc.
List of Valid Qualifiers
March 05, 2012

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration; sample matrix interference.
J	Estimated value ; the analyte concentration was greater than the highest standard
J	Estimated value ; the analyte concentration was less than the LOQ.
J	The reported result is an estimated value.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Nontarget analyte; the analyte is a tentativlely identified compound (TIC) by GC/MS
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported LOD.
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

*****Special Notes for Organic Analytes**

Qualkey: DOD

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

COC No. A 28498

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: Zia / Shaw

Project Contact: Mark Lyon | Contact Phone #: 505-262-8920

Turn Around Requirements: Normal | Location: WSMR

Project ID: HTA 0B/0D

Sampler (print): Bradley T. Davis | Signature: B.T. Davis

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	perchlorate	explosives	Anions	metals total	metals dissolved	Alkalinity	NO3 - NO2	pH	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
HTA 13-0212-1		X	2-15-12	1033	W	9		X	X	X	X	X	X	X	X		
HTA 3-0212-1		X	2-15-12	1200	W	9		X	X	X	X	X	X	X	X		
HTA 3-0212-ms		X	2-15-12	1200	W	9		X	X	X	X	X	X	X	X		
HTA 3-0212-msd		X	2-15-12	1200	W	9		X	X	X	X	X	X	X	X		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Bradley T. Davis	2-15-12	1700	
Relinquished by: (Signature)	Date	Time	Received for L (Signature)

Microbac OVD
Received: 02/16/2012 10:40
By: CARA STRICKLER
221000022442

Cara Strickler

Time	Received by: (Signature)

marks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page _____ of _____

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020497
Account: 3005
Project: 3005.011
Samples: 8
Due Date: 27-FEB-2012

Samplenum	Container ID	Products
L12020497-01	938838	300 8330

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	PREP	W1	EXT	21-FEB-2012 09:15	CEB	RLK	
3	DISP	EXT	DISP	21-FEB-2012 15:17	JKS	JKS	
4	ANALYZ*	EXT	SEMI	23-FEB-2012 09:36	ECL	CEB	

***Sample extract/digestate/leachate**

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	STORE	W1	A1	28-FEB-2012 12:27	BLG	BLG	

***Sample extract/digestate/leachate**

Samplenum	Container ID	Products
L12020497-01	938839	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	SEM	17-FEB-2012 09:09	JBK	RLK	
3	STORE	SEM	A1	29-FEB-2012 11:12	RLK	JBK	

Samplenum	Container ID	Products
L12020497-01	938840	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	21-FEB-2012 08:17	DIH	JKS	
3	STORE	WET	A1	22-FEB-2012 08:16	JKS	DIH	

Samplenum	Container ID	Products
L12020497-01	938841	COR-PH

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	16-FEB-2012 13:04	HJR	RLK	
3	STORE	WET	A1	17-FEB-2012 08:53	RLK	HJR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020497
Account: 3005
Project: 3005.011
Samples: 8
Due Date: 27-FEB-2012

Samplenum	Container ID	Products
L12020497-01	938842	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	SEM	23-FEB-2012 08:57	JWR	JKS	
3	STORE	SEM	A1	28-FEB-2012 10:06	RLK	JWR	

Samplenum	Container ID	Products
L12020497-01	938843	NO3NO2

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	21-FEB-2012 12:06	DIH	JKS	
3	STORE	WET	A1	22-FEB-2012 08:16	JKS	DIH	

Samplenum	Container ID	Products
L12020497-01	938844	FE MN

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		<2
2	ANALYZ	W1	DIG	16-FEB-2012 14:40	ERP	RLK	
3	STORE	DIG	A1	20-FEB-2012 15:03	RLK	ERP	

Samplenum	Container ID	Products
L12020497-02	938845	AG-MSD AL-D AS-MSD BA-MS-D BE-AX-D CA-D CD-MS-

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	DIG	16-FEB-2012 14:40	ERP	RLK	
3	STORE	DIG	W1	16-FEB-2012 15:44	RLK	ERP	
4	STORE	DIG	A1	17-FEB-2012 14:21	RLK	ERP	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020497
Account: 3005
Project: 3005.011
Samples: 8
Due Date: 27-FEB-2012

Samplenum	Container ID	Products
L12020497-03	938846	300 8330

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	PREP	W1	EXT	21-FEB-2012 09:15	CEB	RLK	
3	DISP	EXT	DISP	21-FEB-2012 15:18	JKS	JKS	
4	ANALYZ*	EXT	SEMI	23-FEB-2012 09:36	ECL	CEB	

***Sample extract/digestate/leachate**

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	STORE	W1	A1	28-FEB-2012 12:27	BLG	BLG	

***Sample extract/digestate/leachate**

Samplenum	Container ID	Products
L12020497-03	938847	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	SEM	17-FEB-2012 09:09	JBK	RLK	
3	STORE	SEM	A1	29-FEB-2012 11:12	RLK	JBK	

Samplenum	Container ID	Products
L12020497-03	938848	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	21-FEB-2012 08:17	DIH	JKS	
3	STORE	WET	A1	22-FEB-2012 08:16	JKS	DIH	

Samplenum	Container ID	Products
L12020497-03	938849	COR-PH

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	16-FEB-2012 13:04	HJR	RLK	
3	STORE	WET	A1	17-FEB-2012 08:53	RLK	HJR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020497
Account: 3005
Project: 3005.011
Samples: 8
Due Date: 27-FEB-2012

Samplenum	Container ID	Products
L12020497-03	938850	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	SEM	23-FEB-2012 08:57	JWR	JKS	
3	STORE	SEM	A1	28-FEB-2012 10:06	RLK	JWR	

Samplenum	Container ID	Products
L12020497-03	938851	NO3NO2

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	21-FEB-2012 12:06	DIH	JKS	
3	STORE	WET	A1	22-FEB-2012 08:16	JKS	DIH	

Samplenum	Container ID	Products
L12020497-03	938852	FE MN

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		<2
2	ANALYZ	W1	DIG	16-FEB-2012 14:40	ERP	RLK	
3	STORE	DIG	A1	20-FEB-2012 15:03	RLK	ERP	

Samplenum	Container ID	Products
L12020497-04	938853	AG-MSD AL-D AS-MSD BA-MS-D BE-AX-D CA-D CD-MS-

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	DIG	16-FEB-2012 14:40	ERP	RLK	
3	STORE	DIG	W1	16-FEB-2012 15:44	RLK	ERP	
4	STORE	DIG	A1	17-FEB-2012 14:21	RLK	ERP	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020497
Account: 3005
Project: 3005.011
Samples: 8
Due Date: 27-FEB-2012

Samplenum	Container ID	Products
L12020497-05	938854	300 8330

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	PREP	W1	EXT	21-FEB-2012 09:15	CEB	RLK	
3	DISP	EXT	DISP	21-FEB-2012 15:17	JKS	JKS	
4	ANALYZ*	EXT	SEMI	23-FEB-2012 09:36	ECL	CEB	

***Sample extract/digestate/leachate**

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	STORE	W1	A1	28-FEB-2012 12:26	BLG	BLG	

***Sample extract/digestate/leachate**

Samplenum	Container ID	Products
L12020497-05	938855	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	SEM	17-FEB-2012 09:09	JBK	RLK	
3	STORE	SEM	A1	29-FEB-2012 11:12	RLK	JBK	

Samplenum	Container ID	Products
L12020497-05	938856	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	21-FEB-2012 08:17	DIH	JKS	
3	STORE	WET	A1	22-FEB-2012 08:16	JKS	DIH	

Samplenum	Container ID	Products
L12020497-05	938857	COR-PH

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	16-FEB-2012 13:04	HJR	RLK	
3	STORE	WET	A1	17-FEB-2012 08:54	RLK	HJR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020497
Account: 3005
Project: 3005.011
Samples: 8
Due Date: 27-FEB-2012

Samplenum	Container ID	Products
L12020497-05	938858	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	SEM	23-FEB-2012 08:57	JWR	JKS	
3	STORE	SEM	A1	28-FEB-2012 10:06	RLK	JWR	

Samplenum	Container ID	Products
L12020497-05	938859	NO3NO2

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	21-FEB-2012 12:06	DIH	JKS	
3	STORE	WET	A1	22-FEB-2012 08:16	JKS	DIH	

Samplenum	Container ID	Products
L12020497-05	938860	FE MN

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		<2
2	ANALYZ	W1	DIG	16-FEB-2012 14:40	ERP	RLK	
3	STORE	DIG	A1	20-FEB-2012 15:03	RLK	ERP	

Samplenum	Container ID	Products
L12020497-06	938861	AG-MSD AL-D AS-MSD BA-MS-D BE-AX-D CA-D CD-MS-

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	DIG	16-FEB-2012 14:40	ERP	RLK	
3	STORE	DIG	W1	16-FEB-2012 15:44	RLK	ERP	
4	STORE	DIG	A1	17-FEB-2012 14:21	RLK	ERP	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020497
Account: 3005
Project: 3005.011
Samples: 8
Due Date: 27-FEB-2012

Samplenum	Container ID	Products
L12020497-07	938862	300 8330

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	PREP	W1	EXT	21-FEB-2012 09:15	CEB	RLK	
3	DISP	EXT	DISP	21-FEB-2012 15:17	JKS	JKS	
4	ANALYZ*	EXT	SEMI	23-FEB-2012 09:36	ECL	CEB	

***Sample extract/digestate/leachate**

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	STORE	W1	A1	28-FEB-2012 12:27	BLG	BLG	

***Sample extract/digestate/leachate**

Samplenum	Container ID	Products
L12020497-07	938863	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	SEM	17-FEB-2012 09:09	JBK	RLK	
3	STORE	SEM	A1	29-FEB-2012 11:12	RLK	JBK	

Samplenum	Container ID	Products
L12020497-07	938864	ALK ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	21-FEB-2012 08:17	DIH	JKS	
3	STORE	WET	A1	22-FEB-2012 08:16	JKS	DIH	

Samplenum	Container ID	Products
L12020497-07	938865	COR-PH

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	16-FEB-2012 13:04	HJR	RLK	
3	STORE	WET	A1	17-FEB-2012 08:54	RLK	HJR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L12020497
Account: 3005
Project: 3005.011
Samples: 8
Due Date: 27-FEB-2012

Samplenum	Container ID	Products
L12020497-07	938866	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	SEM	23-FEB-2012 08:56	JWR	JKS	
3	STORE	SEM	A1	28-FEB-2012 10:07	RLK	JWR	

Samplenum	Container ID	Products
L12020497-07	938867	NO3NO2

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	WET	21-FEB-2012 12:06	DIH	JKS	
3	STORE	WET	A1	22-FEB-2012 08:16	JKS	DIH	

Samplenum	Container ID	Products
L12020497-07	938868	FE MN

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		<2
2	ANALYZ	W1	DIG	16-FEB-2012 14:40	ERP	RLK	
3	STORE	DIG	A1	20-FEB-2012 15:03	RLK	ERP	

Samplenum	Container ID	Products
L12020497-08	938869	CD-MS-D CO-MSD CR-MS-D CU-MSD FE-D HG-D K-D MC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	16-FEB-2012 12:50	CLS		
2	ANALYZ	W1	DIG	16-FEB-2012 14:40	ERP	RLK	
3	STORE	DIG	W1	16-FEB-2012 15:44	RLK	ERP	
4	STORE	DIG	A1	17-FEB-2012 14:21	RLK	ERP	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login